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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/104,788 06/25/98 MEYERS

J 97-ST37

010395
SMITH INTERNATIONAL INC.
16740 HARDY
HOUSTON TX 77032

PM82/0313

EXAMINER

DANG, H
ART UNIT PAPER NUMBER

3672
DATE MAILED:

03/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/104,788	Applicant(s) Meyers et al.
	Examiner Hoang C. Dang	Group Art Unit 3672

Responsive to communication(s) filed on Dec 19, 2000

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-68 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-68 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 15, 39 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “the first exposed portions are enhanced with a superhard material” recited in dependent claims 15, 39 and 61 is inconsistent with the recitation of “a first exposed portion that is not superhard” in base claims 1, 26 and 50, respectively.

Claim Rejections - 35 USC § 103

4. Claims 1-18, 20, 22-42, 44, 46-63, 64, 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmberg (US 5,794,728) in view of Keshavan et al (US 5,370,195) or Hedlund (US 5,575,342).

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Palmberg discloses the invention as claimed except that the exposed portions of the inserts are not enhanced with a superhard material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the exposed portions of the inserts of Palmberg's with a layer of superhard material as claimed because it is well known in the well drilling art to provide inserts of a percussion drill bit with a layer of polycrystalline diamond to their wear resistance as evidenced by either Keshavan et al (see column 2, lines 35-49 and column 3, lines 3-7) or Hedlund et al (see column 2, lines 58-64 and column 3, lines 28-39).

As for claims 7-11, 51-55 and 54-58, it would have been obvious to use the dimension or value within the claimed ranges since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

5. Claims 1-18, 20-42, 44-64 and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skidmore (US 3,955,635) in view of Keshavan et al (US 5,370,195) or Hedlund (US 5,575,342).

Skidmore discloses the invention as claimed except that the exposed portions of the inserts are not enhanced with a superhard material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the exposed portions of the inserts of Skidmore's with a layer of superhard material as claimed because it is well known in the well drilling art to provide inserts of a percussion drill bit with a layer of polycrystalline diamond

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to their wear resistance as evidenced by either Keshavan et al (see column 2, lines 35-49 and column 3, lines 3-7) or Hedlund et al (see column 2, lines 58-64 and column 3, lines 28-39).

As for claims 7-11, 51-55 and 54-58, it would have been obvious to use the dimension or value within the claimed ranges since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claims 1-19, 21, 23-43, 45, 47-49, 50-65 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isakov (US 4,716,976) in view of Keshavan et al (US 5,370,195) or Hedlund (US 5,575,342).

Isakov discloses the invention as claimed (see figures 1-14; column 4, line 37 through column 5, line 24) except that the exposed portions of the inserts are not enhanced with a superhard material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the exposed portions of the inserts of Isakov's with a layer of superhard material as claimed because it is well known in the well drilling art to provide inserts of a percussion drill bit with a layer of polycrystalline diamond to their wear resistance as evidenced by either Keshavan et al (see column 2, lines 35-49 and column 3, lines 3-7) or Hedlund et al (see column 2, lines 58-64 and column 3, lines 28-39).

As for claims 7-11, 51-55 and 54-58, it would have been obvious to use the dimension or value within the claimed ranges since it has been held that where the general conditions of a claim

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are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

7. Applicant's arguments filed December 19, 2000 have been fully considered but they are not persuasive. Applicants point out that applicants have amended the claims to recite that the first inserts are not superhard. Applicants only argument is that the applied references have diamond on all of the inserts, no teaching of having diamond on some of the inserts and not the others. This argument is clearly incorrect. Applicants' attention is directed to numerous places, for examples, in Keshavan et al (see column 1, lines 1 through column 2, line 2; column 2, lines 15-19; and column 10, lines 29-33) and in Hedlund et al (see column 1, lines 42-46 and 58-65; and column 3, lines 57-58) where they explicitly teach providing a diamond layer only to gage row inserts because this row of inserts is subjected to the greatest wear.

Drawings

8. The informal substitute drawings (Figures 4-12) were received on December 12, 2000. These substitute drawings are approved by the examiner.

9. The drawings are objected to because in Figures 4-14 parts shown in section are not properly crosshatched. Correction is required.

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10. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hoang Dang, whose telephone number is (703) 308-2149. The examiner can normally be reached on Monday-Friday from 9:15 AM to 5:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell, can be reached on (703) 308-2151. The fax phone number for this Group is (703) 305-3597.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-2168.

A handwritten signature in black ink, appearing to read "HOANG C. DANG". The signature is fluid and cursive, with a large, open loop on the right side.

**HOANG C. DANG
PRIMARY EXAMINER
ART UNIT 3672**

H. Dang/hcd
03/09/2001
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